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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/843,587	04/26/2001	Raymond A. Schoenfelder	7432.122US11	8735
23552	7590	05/19/2004	EXAMINER	
MERCHANT & GOULD PC P.O. BOX 2903 MINNEAPOLIS, MN 55402-0903			LUM VANNUCCI, LEE SIN YEE	
			ART UNIT	PAPER NUMBER
			3611	
DATE MAILED: 05/19/2004				

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

09/843,587

Applicant(s)

SCHOENFELDER, RAYMOND A.

Examiner

Ms. Lee S. Lum

Art Unit

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 3/11/04.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-7, 12-26, 28-31, 33, 34, 36-39 and 42-49 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☒ Claim(s) 1-7, 28-31, 33, 39 and 42-49 is/are allowed.
- 6) ☒ Claim(s) 1-7, 12-26, 34 and 36 is/are rejected.
- 7) ☒ Claim(s) 26, 37 and 38 is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 26 April 2001 is/are: a) ☐ accepted or b) ☒ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) ☐ The proposed drawing correction filed on _____ is: a) ☐ approved b) ☐ disapproved by the Examiner.
- If approved, corrected drawings are required in reply to this Office action.
- 12) ☐ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. §§ 119 and 120

- 13) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).
- a) ☐ The translation of the foreign language provisional application has been received.
- 15) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

Attachment(s)

- 1) ☐ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449) Paper No(s) _____
- 4) ☐ Interview Summary (PTO-413) Paper No(s). _____
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other:

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DETAILED ACTION

1. An Amendment was filed 3/11/04. The Claims provided for examination are 1-7, 12-26, 28-31, 33, 34, 36-39 and 42-49.

2. The drawings are objected to because fig 8 does not identify the "second shaft 145".

3. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

A. **Claims 21-26** are rejected under 35 U.S.C. 103(a) as being unpatentable over Bombardier 3698497 in view of Showalter 5833566.

Bombardier discloses a snowmobile comprising
Engine 10 with drive shaft 36, and,
Endless track 16 driven by track shaft 21.

The reference does not disclose a planetary gear system driving the track, while Showalter shows this exemplary system 16 including

Fixed housing (unidentified, inherent),

Rotatable sun gear 92 driven by drive shaft 62, and supported by bearing assembly 66 (col 3, last line, to col 4, line 2), and,

Plurality of planets 96 driven by the sun gear, and engaged by immovable ring gear 104.

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Although Bombardier's CVT is a functionally equivalent transmission, it would have been obvious to one with ordinary skill in the art at the time the invention was made to include this alternate transmission, as shown in Showalter, as an example of a planetary gear system that is known in the art, and is as efficient and reliable as a CVT, to effect variable speed. This embodiment eliminates belts and pulley.

B. **Claim 36** is rejected under 35 U.S.C. 103(a) as being unpatentable over Bombardier in view of Avramidis 3884097.

Bombardier further discloses the snowmobile as comprising
Skis (unidentified in fig 2) supporting a forward portion of the frame.

The reference does not disclose a planetary gear, and multiple clutch, system, while
Avramidis shows this arrangement with

Planetary gear system 20,

Primary 28, and secondary 60, clutches, connected by chain 68,

The planetary gear system including

First shaft 32 driving sun gear 150, and driven by engine shaft 24,

Planets continuously rotating about the sun gear when the latter is driven
by the first shaft (Table D),

And driving second shaft 190,

The second shaft driving the track through the clutches.

4. ALLOWABLE SUBJECT MATTER

A. **Claims 1-7 are allowable** because prior art does not disclose a snowmobile comprising,
inter alia,

A drive train including a planetary gear system,

Primary and secondary clutch system, each with a different axis,

First and second noncoaxial shafts, the second shaft being coaxial with the secondary
clutch, and, includes a planetary gear plate.

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B. As best understood, **Claims 12-20 are allowable** because prior art does not disclose a snowmobile comprising, *inter alia*,

A drive train including a planetary gear system,

First shaft coupled to a drive shaft, and a sun gear,

Planets continuously rotating about the sun gear when the latter is driven by the first shaft,

The planets and sun gear continuously rotate relative to a ring gear when the drive shaft rotates,

The ring gear included on the second shaft, and

The second shaft driving an endless track.

D. **Claims 28-31 and 33 are allowable** because prior art does not disclose a snowmobile comprising, *inter alia*,

The first shaft being coaxial with the secondary clutch axis.

E. **Claim 34 is allowable** because prior art does not disclose a snowmobile comprising, *inter alia*,

A drive train including a planetary gear system including

A ring gear that is fixed to a housing, and immovable relative to a sun gear and the planets, and,

Primary and secondary clutches, the secondary clutch serving to drive the endless track.

F. **Claims 39 and 42-44 are allowable** because prior art does not disclose a snowmobile comprising, *inter alia*,

An engine drive shaft,

A track shaft noncoaxial with the drive shaft,

A planetary gear system including an input shaft and second shaft, both shafts being coaxial with the track shaft, and,

Gear reduction from the input shaft to the second shaft.

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G. **Claims 45-48 are allowable** because prior art does not disclose a snowmobile comprising, *inter alia*,

A drive train including a planetary gear system,

The system including an input shaft and coaxial second shaft, with gear reduction between the shafts, and,

A sprocket on a track shaft, and driven by the second shaft.

H. **Claim 49 is allowable** because prior art does not disclose a snowmobile comprising, *inter alia*,

A CVT including primary and secondary noncoaxial clutches,

The primary clutch axis being coaxial with an engine drive shaft,

The secondary clutch axis being coaxial with a track shaft, and,

The secondary clutch driving the track shaft.

I. **Claims 23, 37, 38 and 46-48** are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

5. RESPONSE TO REMARKS

Examiner reiterates her rejections as provided above. Re Claims 21-25, Bombadier in view of Showalter discloses the recited elements. The motivation for the combination is simple – nearly every type of transmission can be incorporated into any type of vehicle, for its particular attributes. Here, Showalter shows an exemplary planetary-gear transmission for an automobile. This type of transmission is extremely well-known for effecting gear ratios/variable speed. The reference is combined with Bombadier to replace the latter's CVT system, thus eliminating belts and pulleys. Further, prior art reveals other types of vehicles, including snowmobiles, which employ this type of transmission, such as Avradimis employed for Claim 36. Therefore, it is rebutted that motivation does exist for combining the references.

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Re Claim 36, Avradimis discloses the recited elements in the recited functional arrangement. Applicant's remarks on p 16 appear irrelevant because there is no language corresponding to "the clutches...are not positioned between the planetary gears and track", although the reference does obviate the limitation "the second shaft driving the track through the [clutches]".


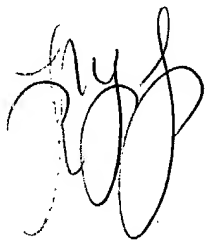
6. **THIS ACTION IS MADE FINAL.** Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.

7. Communication with the Examiner and USPTO

Any inquiry concerning this communication should be directed to Ms. Lum at (703) 305-0232, M-F, 9-6. Our fax number is (703) 872-9306. Any inquiry of a general nature, or relating to the status of this application/proceeding, should be directed to Customer Assistance at (703) 306-5771.

Ms. Lee S. Lum
Examiner
5/10/04



LESLEY D. MORRIS
SUPERVISORY PATENT EXAMINER
TECHNOLOGY CENTER 3600